

PACIFIC WOOD TREATING CORPORATION

111 WEST DIVISION STREET • RIDGEFIELD, WASHINGTON 98642
Phone (206) 887-3562

WA 6906

4-3-91

led

PLEASE REPLY BY



REGULAR
MAIL



AIR
MAIL



WIRE



PHONE

TO Gary A. Bruno, PRC Environmental
1411 4th Ave. Suite 720
Seattle WA 98101

DATE 3 Apr. 1991

"RBT" site monitoring
SUBJECT well sampling

MESSAGE

I have enclosed a copy of the chain of custody for the monitoring well samples taken at the RBT site near Ridgefield WA on the 27 th & 28th of March, 1991.

We look forward to seeing the data from both sides of the "split".

Bryant Adams

SIGNED

REPLY

SENDER-Detach and file for follow-up



3058217



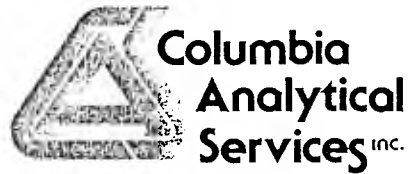
Chain of Custody/ Laboratory Analysis Request

1317 South 13th Avenue • Kelso, WA 98626 • 206/577-7222, Fax 206/636-1068

DATE 9 April 91 PAGE 1 OF 1

PROJECT <u>RBT - PWT Corp #</u>					ORGANIC ANALYSIS										INORGANIC ANALYSIS					OTHER		NUMBER OF CONTAINERS		
SEND REPORT TO <u>B. Adams / PWT Corp</u>					Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Gas/BTEX MOD 8015/8020	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons - Mod 8015	Total Petroleum Hydrocarbons - 418.1	Total Organic Halides (TOX) 9020	Total Organic Carbon (TOC) 415/9060	EPTOX Metals As, Ba, Cd, Cr, Pb, Hg, Se, Ag	Metals (total or dissolved) List Below <u>As, Cr</u>	Cyanide	Ph, Cond, Cl, SO ₄ , PO ₄ , F, Br NO ₃ , NO ₂ (Circle)	NH ₄ -N, COD, Total-P, TKN (Circle)	Coliform Total, Fecal (Circle)	PAH's		Pentachloro	
1.	<u>21</u>	<u>4/9/91</u>	<u>11:30</u>																					<u>5</u>
2.	<u>23</u>	<u>))</u>	<u>"</u>																					<u>4</u>
3.		<u>X</u>																						
4.																								
5.																								
6.																								
7.																								
8.																								

Relinquished By <u>Bryant L. Adams</u>		Relinquished By		Invoice Information P.O.# <u>55486</u>		Project Information Site Contact: <u>B. Adams</u>		Sample Receipt	
Signature <u>Bryant L. Adams</u>	Signature	Bill to: <u>PWT Corp</u>		Site Address:		Shipped Via:		Seals Intact:	
Printed Name	Printed Name					Condition:			
Firm	Firm								
Date/Time <u>4/9/91/1606</u>	Date/Time					Lab No.			
Received By: <u>B. Adams</u>	Received By:	Special Instruction/Comments: <u>Filter Metals in lab please.</u>				SR Number:			
Signature <u>B. Adams</u>	Signature								
Printed Name <u>B. Adams</u>	Printed Name								
Firm <u>PWT Corp</u>	Firm								
Date/Time	Date/Time								



April 18, 1991

Bryant Adams
Pacific Wood Treating
111 West Division St.
Ridgefield, WA 98642

Re: RBT - PWT Corp. Project

Dear Bryant:

Enclosed are the results of the water samples submitted to our lab on March 28, 1991. For your reference, our service request number for this work is K911619.

All analyses were performed in accordance with the laboratory's quality assurance program.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

David L. Edelman

David L. Edelman
Vice-President

DLE/das

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Work Order #: K911619

Inorganic Parameters
mg/L (ppm)

Sample Name: 24 26, 3/27 26, 3/28
Lab Code: K1619-1 K1619-3 K1619-4

Analytes	Method	MRL			
pH	150.1	-	7.99	6.34	6.28
Conductivity (μ mhos/cm)	120.1	2	146	367	288
Chloride	300.0	0.2	5.3	1.3	1.2
Fluoride	300.0	0.2	0.2	ND	ND
Nitrogen, Nitrate	300.0	0.2	0.2	0.3	0.3
Sulfate	300.0	0.2	3.0	4.0	3.8
Total Organic Carbon (TOC)	415.1	0.5	2.5	1.1	1.8
Turbidity (NTU)	180.1	1	340	43	32

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

Approved by Dave Edelmann Date 4/18/91

00001

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Work Order #: K911619

**Inorganic Parameters
mg/L (ppm)**

Sample Name:
Lab Code:

**29
K1619-6**

**Method Blank
K1619-MB**

Analytes	Method	MRL		
pH	150.1	-	6.04	-
Conductivity (μmhos/cm)	120.1	2	115	ND
Chloride	300.0	0.2	3.1	ND
Fluoride	300.0	0.2	ND	ND
Nitrogen, Nitrate	300.0	0.2	ND	ND
Sulfate	300.0	0.2	4.9	ND
Total Organic Carbon (TOC)	415.1	0.5	2.5	ND
Turbidity (NTU)	180.1	1	25	ND

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

Approved by Dave Shelton Date 4/18/91

00002

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Work Order #: K911619

Dissolved Metals
mg/L (ppm)

Analytes:	Chromium	Arsenic
Method:	6010	7060
Method Reporting Limit:	0.005	0.005

Sample Name	Lab Code		
24	K1619-1	ND	ND
26 3/28	K1619-4	ND	ND
29	K1619-6	ND	ND
Method Blank	K1619-MB	ND	ND

ND None Detected at or above the method reporting limit

Approved by Dave Ehlman Date 4/18/91

00003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Date Extracted: 04/03/91
Date Analyzed: 04/09/91
Work Order #: K911619

Polynuclear Aromatic Hydrocarbons
EPA Methods 3510/8100
 $\mu\text{g/L}$ (ppb)

Sample Name:	24	25	26 3/27
Lab Code:	K1619-1	K1619-2	K1619-3

Analytes	MRL			
Naphthalene	1	ND	ND	ND
Acenaphthylene	1	ND	ND	ND
Acenaphthene	1	ND	ND	ND
Fluorene	1	ND	ND	ND
Phenanthrene	1	ND	ND	ND
Anthracene	1	ND	ND	ND
Fluoranthene	1	ND	ND	ND
Pyrene	1	ND	ND	ND
Benzo(a)anthracene	1	ND	ND	ND
Chrysene	1	ND	ND	ND
Benzo(b + k)fluoranthene*	2	ND	ND	ND
Benzo(a)pyrene	1	ND	ND	ND
Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene*	2	ND	ND	ND
Benzo(g,h,i)perylene	1	ND	ND	ND

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

* Compounds co-elute; therefore, the results are reported as the combined concentration.

Approved by Dave Edelman Date 4/18/91

00004

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Date Extracted: 04/03/91
Date Analyzed: 04/09/91
Work Order #: K911619

Polynuclear Aromatic Hydrocarbons
EPA Methods 3510/8100
 $\mu\text{g/L}$ (ppb)

Sample Name: 26 3/28 29 Method Blank
Lab Code: K1619-4 K1619-6 K1619-MB

Analytes	MRL			
Naphthalene	1	ND	ND	ND
Acenaphthylene	1	ND	ND	ND
Acenaphthene	1	ND	ND	ND
Fluorene	1	ND	ND	ND
Phenanthrene	1	ND	ND	ND
Anthracene	1	ND	ND	ND
Fluoranthene	1	ND	ND	ND
Pyrene	1	ND	ND	ND
Benzo(a)anthracene	1	ND	ND	ND
Chrysene	1	ND	ND	ND
Benzo(b + k)fluoranthene*	2	ND	ND	ND
Benzo(a)pyrene	1	ND	ND	ND
Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene*	2	ND	ND	ND
Benzo(g,h,i)perylene	1	ND	ND	ND

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

* Compounds co-elute; therefore, the results are reported as the combined concentration.

Approved by Dave Edelman Date 4/18/91

00005

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Date Extracted: 03/29/91
Date Analyzed: 04/01/91
Work Order #: K911619

Chlorinated Phenolic Compounds
EPA Methods 3510/Modified 8150
 $\mu\text{g/L}$ (ppb)

Sample Name	Lab Code	MRL	Total Tetrachloro- phenols	Pentachloro- phenol
24	K1619-1	5	ND	ND
25	K1619-2	5	ND	ND
26 3/27	K1619-3	5	ND	ND
26 3/28	K1619-4	5	ND	ND
29	K1619-6	5	ND	ND
Method Blank	K1619-MB	5	ND	ND

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

Approved by Dave Edelma Date 4/18/91

00006

APPENDIX A
LABORATORY QC RESULTS

00007

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Work Order #: K911619

QA/QC Report
Duplicate Summary
Dissolved Metals
mg/L (ppm)

Sample Name: 24
Lab Code: K1619-1

Analytes	Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference
Arsenic	7060	0.005	ND	ND	ND	
Chromium	6010	0.005	ND	ND	ND	

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

Approved by Dave Edelmann Date 4/18/91

00008

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Work Order #: K911619

QA/QC Report
Matrix Spike Summary
Dissolved Metals
mg/L (ppm)

Sample Name: 24
Lab Code: K1619-1MS

Analytes	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery
Arsenic	0.005	0.04	ND	0.042	105
Chromium	0.005	0.2	ND	0.196	98

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

Approved by Dave Edelman Date 4/18/91

00009

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Date Extracted: 04/03/91
Date Analyzed: 04/09/91
Work Order #: K911619

QA/QC Report
Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons
EPA Methods 3510/8100

Sample Name	Lab Code	Percent Recovery <i>p</i> -Terphenyl
24	K1619-1	64.3
25	K1619-2	48.6
26 3/27	K1619-3	77.5
26 3/28	K1619-4	73.6
29	K1619-6	75.7
Method Blank	K1619-MB	35.9
	CAS Acceptance Criteria	35-105

Approved by Dave Shelton Date 4/18/91

00010

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Date Extracted: 03/29/91
Date Analyzed: 04/01/91
Work Order #: K911619

QA/QC Report
Surrogate Recovery Summary
Chlorinated Phenolic Compounds
EPA Methods 3510/Modified 8150

Sample Name	Lab Code	Percent Recovery 4-Bromo-2,6-dichlorophenol
24	K1619-1	78.0
25	K1619-2	66.7
26 3/27	K1619-3	80.9
26 3/28	K1619-4	82.8
29	K1619-6	77.9
29	K1619-6MS	87.7
29	K1619-6DMS	84.6
Method Blank	K1619-MB	89.2

CAS Acceptance Criteria 60-125

Approved by Dave Edelman Date 4/18/91

00011

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Project: RBT - PWT Corp.
Sample Matrix: Water

Date Received: 03/28/91
Date Extracted: 03/29/91
Date Analyzed: 04/01/91
Work Order #: K911619

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary
Chlorinated Phenolic Compounds
EPA Methods 3510/Modified 8150
 $\mu\text{g/L}$ (ppb)

Sample Name: 29
Lab Code: K1619-6MS/DMS

Analytes	Spike Level		Sample Result	Spike Result		Percent Recovery		
	MS	DMS		MS	DMS	MS	DMS	CAS Acceptance Criteria
Total Tetrachlorophenols	300	300	ND	256	250	85.3	83.3	50-120
Pentachlorophenol	150	150	ND	127	124	84.7	82.7	55-120

ND None Detected at or above the method reporting limit

Approved by Dave Edelmann Date 4/18/91

00012

APPENDIX B
CHAIN OF CUSTODY INFORMATION

00013



Chain of Custody/ Laboratory Analysis Request

1317 South 13th Avenue • Kelso, WA 98626 • 206/577-7222, Fax 206/636-1068

DATE 28 Mar 91 PAGE 1 OF 1

PROJECT <u>RIST - PWT Corp.</u>					ORGANIC ANALYSIS										INORGANIC ANALYSIS					OTHER		NUMBER OF CONTAINERS
SEND REPORT TO <u>Bryant Adams</u>					Base/New/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Gas/BTEX MOD 8015/8020	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons - Mod 8015	Total Petroleum Hydrocarbons - 418.1	Total Organic Halides (TOX) 9020	Total Organic Carbon (TOC) 415/9060	EPTOX Metals As, Ba, Cd, Cr, Pb, Hg, Se, Ag	* Metals (total or dissolved) List Below As, Cr, Cyanide	Ph, Cond, Cl, SO ₄ , PO ₄ , F, Br NO ₃ , NO ₂ , (Circle) + U.V. G	NH ₄ -N, COD, Total-P, TKN (Circle)	Coliform (Circle) Total, Fecal	PAH's	Penta	
1.	24	3/27/91												✓	✓	✓			✓	✓	5	
2.	25	3/27/91												✓		✓			✓	✓	5	
3.	26	3/27/91												✓		✓			✓	✓		
4.	26	3/28/91												✓	✓	✓			✓	✓		
5.	29	3/28/91												✓	✓	✓			✓	✓	5	
6.	28	3/28/91												✓	✓	✓			✓	✓	5	
7.																						
8.																						

Relinquished By <u>Bryant L. Adams</u>		Relinquished By		Invoice Information:		Project Information		Sample Receipt	
Signature <u>Bryant L. Adams</u>	Signature	P.O.#	Site Contact:	Shipped Via:	Printed Name	Printed Name	Seals Intact:	Condition:	
Firm	Firm	Bill to:	Site Address:	Lab No.	Date/Time <u>12:42</u>	Date/Time			
Received By: <u>Ruth Allison</u>	Received By:	Special Instruction/Comments: <u>Lo sampler - Mike Baum David Newton & Assoc.</u>		SR Number:					
Signature	Signature	Sampling observed by - GNB of PRC							
Printed Name <u>Ruth Allison</u>	Printed Name	* Filter metals at Lab							
Firm <u>CAS</u>	Firm	metals btl 11619 1 & 5 can't be filtered at lab, already preserved							
Date/Time <u>3/28/91 1242</u>	Date/Time								

K1619

00014



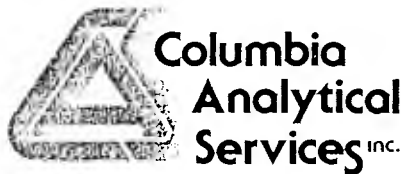
Chain of Custody/ Laboratory Analysis Request

1317 South 13th Avenue • Kelso, WA 98626 • 206/577-7222, Fax 206/636-1068

DATE 28 Mar 91 PAGE 1 OF 1

PROJECT <u>RBT - PWT Corp.</u> # <u> </u>					ORGANIC ANALYSIS										INORGANIC ANALYSIS					OTHER		NUMBER OF CONTAINERS
SEND REPORT TO <u>Bryant Adams</u>					Base/Neu/Acid Organics GC/MS 625/6270	Volatile Organics GC/MS 624/8240	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Gas/BTEX MOD 8015/8020	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons - Mod 8015	Total Petroleum Hydrocarbons - 418.1	Total Organic Halides (TOX) 9020	Total Organic Carbon (TOC) 415/9060	EPTOX Metals As, Ba, Cd, Cr, Pb, Hg, Se, Ag	* Metals (Total or dissolved) List Below <u>As, Cr</u>	Cyanide	Ph, Cond, Cl, SO ₄ , F, Br, NO ₃ , NO ₂ , (Circle) <u>F, U, V, L</u>	NH ₄ -N, COD, Total-P, TKN (Circle)	Coliform (Circle) Total, Fecal	<u>PAH's</u>	
1	24 = B-4	3/27/91												✓	✓		✓			✓	✓	5
2	25 = B-5	3/27/91												NO			NO			✓	✓	5
3	26 = B-6	3/27/91											✓				✓			✓	✓	} 5
4	26 = B-6	3/28/91											✓	✓		✓			✓	✓	5	
5	29 = TOC influent	3/28/91											✓	✓		✓			✓	✓	5	
6	28 = TOC TANK	3/28/91											NO	NO		NO			NO	NO	5	
7																						
8																						

Relinquished By <u>Bryant L. Adams</u>		Relinquished By		Invoice Information:		Project Information		Sample Receipt	
Signature <u>Bryant L. Adams</u>	Signature	P.O.#	Site Contact:	Shipped Via:	Bill to:	Site Address:	Seals Intact:	Condition:	
Printed Name	Printed Name								
Firm	Firm								
Date/Time <u>12:42</u>	Date/Time							Lab No.	
Received By: <u>Ruth Allison</u>	Received By:	Special Instruction/Comments:						SR Number:	
Signature	Signature	<u>CO Sampler - Mike Baum David Newton & Assoc.</u> <u>Sampling observed by - GAB of PRC</u> <u>* Filter metals at Lab</u>							
Printed Name <u>Ruth Allison</u>	Printed Name								
Firm <u>CAS</u>	Firm								
Date/Time <u>3/28/91 1242</u>	Date/Time								



May 1, 1991

Bryant Adams
Pacific Wood Treating
111 West Division St.
Ridgefield, WA 98642

Dear Bryant:

Enclosed are the results of the samples submitted to our lab on April 9, 1991. For your reference, our service request number for this work is K911857.

All analyses were performed in accordance with the laboratory's quality assurance program.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

A handwritten signature in cursive script, reading "Cheryl Noone-Fisher".

Cheryl Noone-Fisher
Project Chemist

CNF/das

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Sample Matrix: Water

Date Received: 04/09/91
Work Order #: K911857

**Inorganic Parameters
mg/L (ppm)**

Sample Name:	21	23	Method Blank
Lab Code:	K1857-1	K1857-2	K1857-MB

Analytes	Method	MRL			
pH	150.1	-	6.78	7.54	-
Conductivity (μ mhos/cm)	120.1	2	99	420	ND
Bromide	300.0	0.2	ND	ND	ND
Chloride	300.0	0.2	0.4	33.5	ND
Fluoride	300.0	0.2	ND	0.4	ND
Nitrogen, Nitrate	300.0	0.2	ND	0.3	ND
Nitrogen, Nitrite	300.0	0.2	ND	ND	ND
Sulfate	300.0	0.2	2.2	5.8	ND
Total Organic Carbon (TOC)	415.1	0.5	1.5	1.2	ND
Turbidity (NTU)	180.1	1	2,150	585	ND

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

Approved by

Cheryl Anne Fisher

Date

5-1-91

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Sample Matrix: Water

Date Received: 04/09/91
Work Order #: K911857

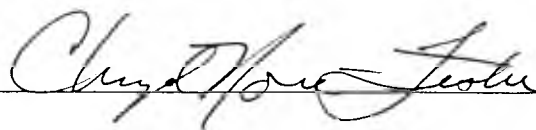
Dissolved Metals
mg/L (ppm)

Analytes:	Chromium	Arsenic
Method:	6010	7060
Method Reporting Limit:	0.005	0.005

Sample Name	Lab Code		
21	K1857-1	ND	ND
23	K1857-2	ND	ND
Method Blank	K1857-MB	ND	ND

ND None Detected at or above the method reporting limit

Approved by



Date

5-1-91

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Sample Matrix: Water

Date Received: 04/09/91
Date Extracted: 04/13/91
Date Analyzed: 04/23/91
Work Order #: K911857

Polynuclear Aromatic Hydrocarbons
EPA Methods 3510/8100
 $\mu\text{g/L}$ (ppb)

Sample Name: 21 23 Method Blank
Lab Code: K1857-1 K1857-2 K1857-MB

Analytes	MRL			
Naphthalene	1	ND	ND	ND
Acenaphthylene	1	ND	ND	ND
Acenaphthene	1	ND	ND	ND
Fluorene	1	ND	ND	ND
Phenanthrene	1	ND	ND	ND
Anthracene	1	ND	ND	ND
Fluoranthene	1	ND	ND	ND
Pyrene	1	ND	ND	ND
Benzo(a)anthracene	1	ND	ND	ND
Chrysene	1	ND	ND	ND
Benzo(b + k)fluoranthene*	2	ND	ND	ND
Benzo(a)pyrene	1	ND	ND	ND
Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene*	2	ND	ND	ND
Benzo(g,h,i)perylene	1	ND	ND	ND

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

* Compounds co-elute; therefore, the results are reported as the combined concentration.

Approved by Cheryl D. Jones-Tucker Date 5-1-91

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Sample Matrix: Water

Date Received: 04/09/91
Date Extracted: 04/13/91
Date Analyzed: 04/15/91
Work Order #: K911857

Chlorinated Phenolic Compounds
EPA Methods 3510/Modified 8150
 $\mu\text{g/L}$ (ppb)

Sample Name	Lab Code	MRL	Total Tetrachloro- phenols	Pentachloro- phenol
21	K1857-1	5	ND	ND
23	K1857-2	5	ND	ND
Method Blank	K1857-MB	5	ND	ND

MRL Method Reporting Limit

ND None Detected at or above the method reporting limit

Approved by

Chris Anne Fisher

Date

5-1-91

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Sample Matrix: Water

Date Received: 04/09/91
Date Extracted: 04/13/91
Date Analyzed: 04/23/91
Work Order #: K911857

QA/QC Report
Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons
EPA Methods 3510/8100

Sample Name	Lab Code	Percent Recovery <i>p</i> -Terphenyl
21	K1857-1	82.6
23	K1857-2	94.6
Method Blank	K1857-MB	63.0

CAS Acceptance Criteria 35-105

Approved by



Date

5-1-91

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Pacific Wood Treating
Submitted By: Bryant Adams
Sample Matrix: Water

Date Received: 04/09/91
Date Extracted: 04/13/91
Date Analyzed: 04/15/91
Work Order #: K911857

QA/QC Report
Surrogate Recovery Summary
Chlorinated Phenolic Compounds
EPA Methods 3510/Modified 8150

Sample Name	Lab Code	Percent Recovery 4-Bromo-2,6-dichlorophenol
21	K1857-1	98.0
23	K1857-2	91.2
Method Blank	K1857-MB	73.0

CAS Acceptance Criteria 60-125

Approved by



Date

5-1-91



Chain of Custody/ Laboratory Analysis Request

1317 South 13th Avenue • Kelso, WA 98626 • 206/577-7222, Fax 206/636-1068

DATE 9 April 91 PAGE 1 OF 1

PROJECT <u>RBT - PWT Corp #</u>					ORGANIC ANALYSIS										INORGANIC ANALYSIS					OTHER		NUMBER OF CONTAINERS	
SEND REPORT TO <u>B. Adams / PWT Corp</u>					Base/New Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Gas/BTEX MOD 8015/8020	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons - Mod 8015	Total Petroleum Hydrocarbons - 418.1	Total Organic Halides (TOX) 9020	Total Organic Carbon (TOC) 415/9060	EPTOX Metals As, Ba, Cd, Cr, Pb, Hg, Se, Ag	Metals (total or dissolved) List Below <u>As, Cr</u>	Cyanide	Ph, Cond, Cl, SO ₄ , PO ₄ , F, Br NO ₃ , NO ₂ (Circle)	NH ₄ -N, COD, Total-P, TKN (Circle)	Coliform (Circle) Total, Fecal	PAH's		Pentachloro
1.	<u>21</u>	<u>4/9/91</u>	<u>11:30</u>										<u>✓</u>	<u>✓</u>		<u>✓</u>					<u>✓</u>	<u>✓</u>	<u>5</u>
2.	<u>23</u>	<u>))</u>	<u>11</u>										<u>✓</u>	<u>✓</u>		<u>✓</u>					<u>✓</u>	<u>✓</u>	<u>4</u>
3.		<u>XX</u>																					
4.																							
5.																							
6.																							
7.																							
8.																							

Relinquished By <u>Bryant L. Adams</u>		Relinquished By		Invoice Information:		Project Information		Sample Receipt	
Signature <u>Bryant L. Adams</u>	Signature	P.O.# <u>55486</u>	Site Contact: <u>B. Adams</u>	Bill to: <u>PWT Corp</u>		Shipped Via:			
Printed Name	Printed Name		Site Address:			Seals Intact:			
Firm	Firm					Condition:			
Date/Time <u>4/9/91 1600</u>	Date/Time					Lab No.			
Received By: <u>Bryant L. Adams</u>	Received By:	Special Instruction/Comments: <u>Filter Metals in lab please.</u>				SR Number:			
Signature <u>B. Adams</u>	Signature								
Printed Name <u>B. Adams</u>	Printed Name								
Firm <u>PWT Corp</u>	Firm								
Date/Time <u>4/9/91 1100</u>	Date/Time								

Chain of Custody/ Laboratory Analysis Request

1317 South 13th Avenue • Kelso, WA 98626 • 206/577-7222, Fax 206/636-1068

DATE 9 April 91 PAGE 1 OF 1

PROJECT <u>RBT - PWT Corp #</u> SEND REPORT TO <u>B. Adams / PWT Corp</u> ADDRESS <u>111 W. Div. Ridgefield</u> TELEPHONE# <u>206 887-3562</u> SAMPLERS NAME <u>B. Adams</u> PHONE# _____ SAMPLERS SIGNATURE <u>Bryant L Adams</u>					ORGANIC ANALYSIS															INORGANIC ANALYSIS					OTHER		NUMBER OF CONTAINERS
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Gas/BTEX MOD 8015/8020	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons - Mod 8015	Total Petroleum Hydrocarbons - 418.1	Total Organic Halides (TOX) 9020	Total Organic Carbon (TOC) 415/9060	EPTOX Metals As, Ba, Cd, Cr, Pb, Hg, Se, Ag	Metals (total or dissolved) List Below <u>As, Cr</u>	Cyanide	Ph, Cond, Cl, SO ₄ , PO ₄ , F, Br NO ₃ , NO ₂ (Circle)	NH ₄ -N, COD, Total-P, TKN (Circle)	Coliform (Circle) Total, Fecal	PAH's	Pentac 1 & 4					
1. <u>21</u>	<u>4/9/91</u>	<u>11:30</u>											<u>nd</u>	<u>✓</u>		<u>✓</u>		<u>✓</u>			<u>✓</u>	<u>✓</u>	<u>5</u>				
2. <u>23</u>	<u>11</u>	<u>11</u>											<u>nd</u>	<u>✓</u>		<u>✓</u>		<u>✓</u>			<u>✓</u>	<u>✓</u>	<u>4</u>				
3.																											
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7.																											
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Relinquished By <u>Bryant L. Adams</u>		Relinquished By _____ Signature <u>Bryant L Adams</u> Printed Name		Invoice Information P.O.# <u>55486</u> Bill to: <u>PWT Corp</u>		Project Information Site Contact: <u>B. Adams</u> Site Address: _____		Sample Receipt Shipped Via: _____ Seals Intact: _____ Condition: _____ Lab No. _____	
Date/Time <u>4/9/91 11:00</u>		Date/Time _____		Special Instruction/Comments: <u>Filter Metals in lab please</u>		SR Number: _____			
Received By: <u>[Signature]</u>		Received By: _____		<u>4:00 P.M.</u>					
Signature <u>[Signature]</u>		Signature _____							
Printed Name <u>CAS</u>		Printed Name _____							
Firm <u>4/9/91 400</u>		Firm _____							
Date/Time _____		Date/Time _____							



ESD

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INSPECTION REPORT

COMPLETED

August 9, 1991

RIDGEFIELD BRICK AND TILE PACIFIC WOODTREATERS, CORP.

111 W. DIVISION ST.
RIDGEFIELD, WA 98642

8-9-91

FACILITY ADDRESS:

Ridgefield Brick and Tile (defunct)
Present owners of property are
Pacific Woodtreaters, Corp.
111 W. Division St.
Ridgefield, WA 98642

Telephone: (206) 887-3562

SITE ADDRESS:

4334 W. 289th St.
Ridgefield, WA 98642

SITE CONTACTS:

Bryant Adams, Environmental Engineer

EPA INSPECTION TEAM:

W. Douglas Smith, Sr. Compliance Investigator,
(206) 553-7176
Jack Boller, Environmental Protection Specialist

INSPECTION COMMENCED:

8-9-91 @ 11:30 hours

BACKGROUND:

Ridgefield Brick and Tile occupied a piece of ground
approximately 1 mile north of Ridgefield, WA. In 1977

Pacific Woodtreaters Corp. (PWC) built a wood fired boiler. They sent EPA a Part A notification as a burner of Pentachlorophenol waste wood products. The ash generated in the process was taken to the property operated by Ridgefield Brick and Tile. The ash was placed in an area with a clay base previously used by the RB&T.

The incinerator was shut down in 1983.

In 1984 a state directed closure took place.

The state and EPA notified PWC that closure would be required. Sweet Edwards, hired by PWC to study the problem suggested three methods to close the site. These were: (1) Close in place with monitoring wells to establish that the material was stable and posed no threat to health or the environment; (2) Move to a stable location adjacent to the original location with a stable, impermeable base and cap in place; or (3) To dig it up and transport for disposal in an approved manner.

Closure in place with monitoring wells was the method selected. Mr. Adams stated that EPA had been "vague and ambiguous" in establishing "how clean is clean." The state apparently did not require Federal standards. Mr. Adams said, State standards were met but EPA issued a Notice of Violation to PWC in 1985.

Mr. Adams said that the waste had never been sampled or analyzed as a bench mark to identify regulated constituents. He thought that this was strange because the assumption had always been made that the clean up was entirely the responsibility of PWC. He thought that this was the case because PWC was the most recent property owner.

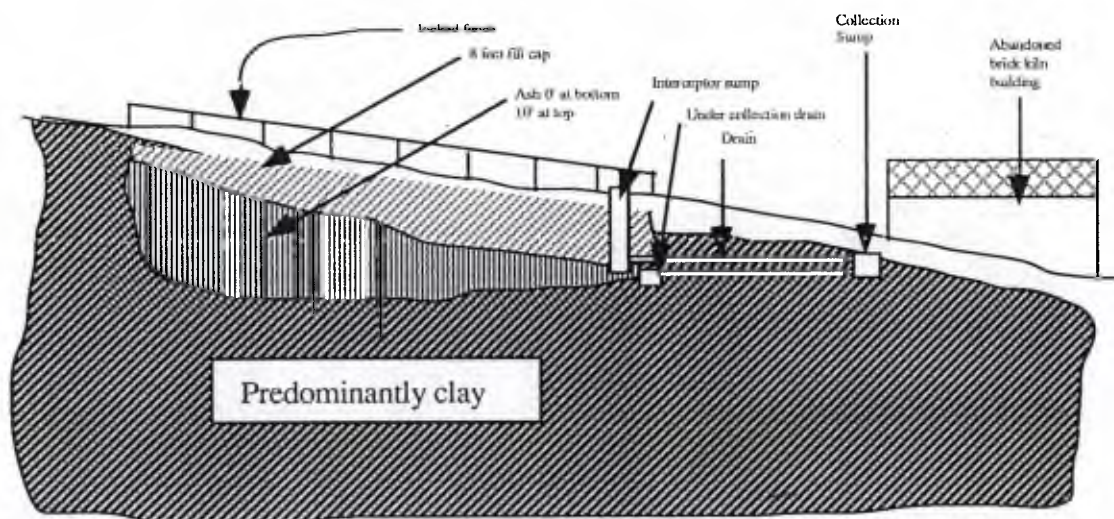
In November or December of 1986 a Monitoring Plan and Consent Agreement with EPA was established.

An interceptor system was installed with an under collection drain. Eric Egberg and Frank Monahan of the Washington State Department of Ecology had

oversight. (See figure 1).

FIGURE 1:

Site is approximately .75 acres



The waste was designated as K001 under RCRA.

Sweet Edwards decided that PWC should drill and sample and then apply for delisting, based on the concentrations found in the ground water.

There were two aquifers identified by Fred Wolf, Hydrologist for EPA Region 10. Washington DC Headquarters offices of EPA told PWC that a year of water data would be needed before any determination could be made. Initially three lysimeter wells were installed. EPA said that they would not be satisfactory. A total of 7 monitoring wells were then installed. The monitoring wells varied from 20 to 50 feet in depth. They were drilled with a hollow stem auger until "refusal" because they encountered the Troutdale formation which prevents further drilling by that method. PWC and Sweet Edwards studied samples from the wells for a year (See analytical report data attached).

PWC asked EPA in Washington DC what cleanup levels would be. EPA said that PWC would have to clean up to

background. This could only be accomplished through the removal process.

On the July 1990 Subpart S. Proposed regulations other options were made available. Mr. Adams did not elaborate on what these options were.

Present monitoring well data shows no contamination to detection levels (see attached lab report data). The laboratory was Columbia Analytical Services, Kelso, WA 98626.

Norton Consultants, Portland was compiling data for PWC at the time of this inspection. Their report was expected in the immediate future.

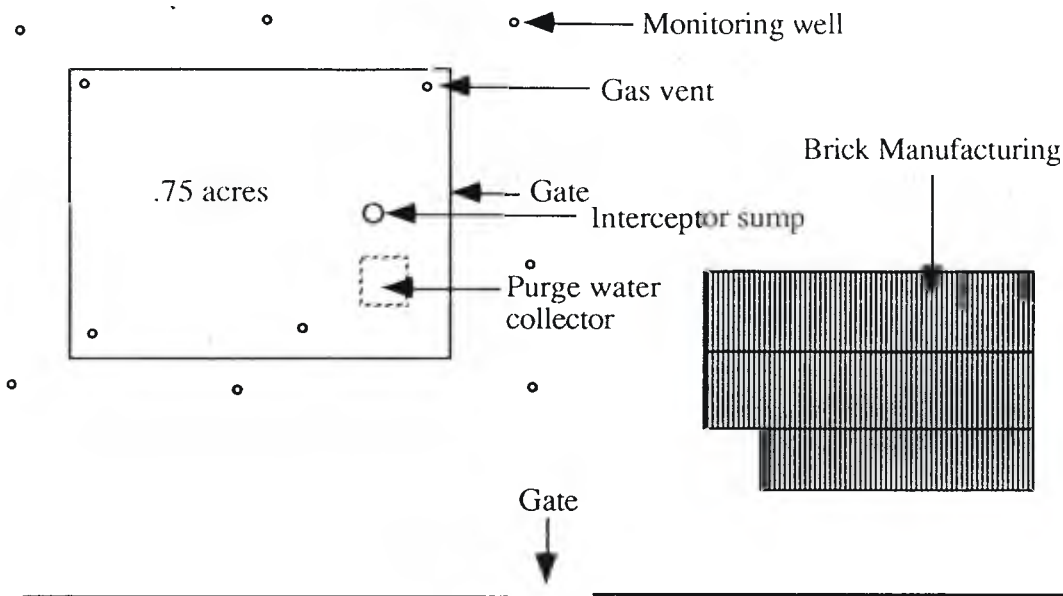
Marsha Bailey, was the EPA Region 10's RCRA contact at the time of this inspection.

SITE

INVESTIGATION:

At approximately 1230 hours Mr. Adams, Mr. Boller and I drove to the site. It is located on a gently sloping hillside in rural farm land. To the west of the site about 150-200 feet is a large barn type building where Ridgefield Brick and Tile had its manufacturing process. The area contaminated with PWC ash waste was fenced with a locked gate (See panoramic sequence of 5 photographs). We entered the gate and inspected the interceptor drain sump. The sump had a locked lid which Mr. Adams removed (See photographs 3,4, & 5). There was water in the bottom of the sum about 8 feet from the top of the pipe. The water had a slight sheen on the top but no odor. (See Figure 2)

FIGURE 2:



Mr. Adams expressed some concern that the wells may not be intercepting the waste plume. He said that a final determination will be reached after the Norton report is received. Because of the extremely low concentrations of toxins monitored PWC hopes to be able to satisfactorily close the site soon.

No leaching from the cell was observed. Vegetation on and around the site was healthy and uniform in density and species diversity. None of the flora appeared to be stressed (See photographs 1 & 2). There were no odors present on the site. There was no evidence of surface run off.

CLOSING CONFERENCE:

Mr. Adams feels that there are two or three main issues regarding closure of the site. The first is the identification of the constituents of the original waste material so that monitoring may be compared. The second is establishing "how clean is clean." The third

problem is the apparent communication delays between all the parties concerned. Analytical data seemed to indicate that the waste either wasn't moving to Groundwater in detectable quantities, or that the monitoring wells were not intercepting waste plumes.

SAFETY

CONSIDERATIONS: Street clothes were worn. A hard hat is required when on the PWC plant property, but not on the old Ridgefield Brick and Tile property which is essentially farm land.

ATTACHMENTS:

- A. Notebook
- B. Photographs
- C. Documents picked up from PWC.

8/13/81
DATE



W. Douglas Smith, Sr. Compliance Investigator

U.S. EPA Analytical Data

SITE: Ridgefield Brick and Tile

SAMPLE LOCATION: Cell Toe drain

SAMPLED BY: Tetra Tech Consultants

Sample Date: 23 May 1988

	TD-1	TD-2	TD-3	TD-4	Ave.	Blank
Constituent	Concentration in micrograms/l (ppb)					
Pentachlorophenol	0.14	0.73	0.082	0.22	0.29	0.034
Tetrachlorophenol	0.054	0.37	0.022	0.029	0.12	UD
Phenanthrene	0.4	0.5	0.40	0.2	0.38	UD.050
Fluorene	0.8	0.9	0.50	UD 0.7	0.725	UD.80
Naphthelene	1.5	1.8	UD 3.30	UD 3.5	1.65	UD 3.8
Anthracene	0.04	0.04	0.04	0.02	0.035	UD 0.1
Fluoranthene	0.1	0.1	0.1	UD 0.1	0.1	UD 0.1
11 other PAH's	UD	UD	UD	UD	UD	UD
Arsenic	UD 3.4			(6.0)		UD 3.4
Chromium	UD 7.9			24		UD 7.9
Copper	UD 24.8			UD 25		UD 25
Iron	76,570			7,430		(88)
VOC (all 34 tested)	UD	UD	UD	UD	UD	UD
beta radiation	-	-	-	1.5 pCi/l		
low alpha radiation	-	-	-	0.38 pCi/l		

RBT Site Ground Water Monitoring; Concentrations in $\mu\text{g/l}$ (ppb)

Compound	Date Sampled	Toe Drain	Well B-1	Well B-4	Well B-5	EPA health based Criteria	PQL (Published Quantitation Limit)	Lab. reporting results
Pentachlorophenol	16 Mar 87	U 1	-	-	-	1,000	No Appl.	CL
	29 Jan 88	U 1	-	-	-			CAS
	23 May 88	U .3	-	-	-			EPA
	31 May 89	U 10	-	-	U 1			CAS
	12 Jan 90	U .6	U 0.1	U 0.1	U 0.1			CAS
PAH's overall	16 Mar 87	U 15	-	-	-	NONE	NONE	CL
	29 Jan 88	U 10	-	-	-			CAS
	23 May 88	U 10	-	-	-			EPA
	31 May 89	U 1	-	-	-			CAS
	12 Jan 90	U 3	U 3	U 3	U 3			CAS
Benz(a)anthracene	23 May 88	U 0.05	-	-	-	0.01	10	EPA
	12 Jan 90	U 3	U 3	U 3	U 3			CAS
Benz(a)pyrene	23 May 88	U 0.200	-	-	-	0.003	10	EPA
	12 Jan 90	U 3	U 3	U 3	U 3			CAS
Dibenz(a,h)anthracene	23 May 88	U 0.05	-	-	-	0.007	10	EPA
	12 Jan 90	U 3	U 3	U 3	U 3			CAS
Arsenic	16 Mar 87	U 5	-	-	-	50	Not Applicable	CL
	29 Jan 88	U 5	-	-	-			CAS
	23 May 88	6	-	-	U 5			EPA-AL
	12 Jan 90	U 5	U 5	7	U 5			CAS
Chromium	16 Mar 87	U 5	-	-	-	50	NA	CL
	29 Jan 88	U 10	-	-	-			CAS
	23 May 88	U 8 (24)	-	-	-			EPA-AL
	12 Jan 90	U 5	U 5	U 5	U 5			CAS

Laboratory identity

CL; Columbia Laboratories, Inc. 36740 East Crown Pt. Hwy Corbett, OR
CAS; Columbia Analytical Services, 1317 So. 13th Ave. Kelso, WA
EPA; EPA Region X Lab. Management System, Manchester, WA
EPA-AL; Associated Laboratories Orange, CA

TOE DRAIN LEACHATE ANALYSIS SUMMARY * RBT Site

Sampling Date	PCP (ppb)	Naphthalene (ppb)	Arsenic (ppm)
10-20-83	0.56	10, 0.17	.009
1-11-84	1.27	5	L/.005
3-26-84	2.70	L/5	.008
6-12-84	L/.1	L/.1	L/.005
12-12-85	.75	L/1	L/.005
2-27-86 (split sample)	1.14	4.9	L/.005
2-27-86 (split sample)	L/1	6.1	L/.005
12-23-86	L/1	.45	L/.005
1- 8-87	1.5	3	L/.005
1-29-87	L/1	L/10	L/.005
3-16-87	L/1	L/15	L/.005
5-23-88	0.29	L/10	.006
1-12-90	L/1	L/1	L/.005

*Columb
Co-bet*

Col An Son